IN THE CLAIMS:

1. (Currently Amended) A method for the treatment ~~or prevention~~ of an angioproliferative condition which comprises administering to a patient experiencing said angioproliferative condition a pharmaceutically effective amount of a *Porphyromonas gingivalis* cysteine protease selected from the group consisting of PrtP, HagA, ~~a HagArep~~ HArep1, HArep2, HArep3, and HArep4 peptide, ~~a fragment or active site thereof~~ to exert an angiostatic effect.

2. (Original) The method according to claim 1 wherein said angioproliferative condition is a carcinoma, sarcoma, melanoma, ocular retinopathy, retrolental fibroplasias, psoriasis, angiofibromas, endometriosis, hemangioma, rheumatoid arthritis, capillary proliferation within atherosclerotic plaque, or a combination of such disorders.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Withdrawn) A composition for treatment or prevention of an angioproliferative condition comprising a pharmaceutically effective amount of a proteinase and an excipient for administration to a patient afflicted with said angioproliferative disorder.

7. (Withdrawn) The composition according to claim 6 wherein said angioproliferative condition is a carcinoma, sarcoma, melanoma, ocular retinopathy, retrolental fibroplasias, psoriasis, angiofibromas, endometriosis, hemangioma, rheumatoid arthritis, capillary proliferation within atherosclerotic plaque, or a combination of such disorders.

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8. (Withdrawn) The composition according to claim 6 wherein said proteinase is derived from a bacterium.

9. (Withdrawn) The composition according to claim 8 wherein said bacterium is *Porphyromonas gingivalis*.

10. (Withdrawn) The composition according to claim 9 wherein said protease is PrtP, HagA, other *P. gingivalis* proteinase, a HagArep peptide, a fragment or active site thereof or DNA.

11. (Currently Amended) A method for selectively treating an angioproliferative condition which comprises contacting a vasculature supplying a biological structure affected by said angioproliferative condition with an angiostatically effective amount of a *Porphyromonas gingivalis* cysteine protease selected from the group consisting of PrtP, HagA, ~~a HagArep~~ HArep1, HArep2, HArep3, and HArep4 peptide~~, a fragment or active site thereof~~.

12. (Previously Presented) The method according to claim 11 wherein the basolateral surface of said vasculature is contacted with the protease.

13. (Original) The method according to claim 11 wherein said angioproliferative condition is a carcinoma, sarcoma, melanoma, ocular retinopathy, retrolental fibroplasias, psoriasis, angiofibromas, endometriosis, hemangioma, rheumatoid arthritis, capillary proliferation within atherosclerotic plaque, or a combination of such disorders.

14. (Canceled)

15. (Canceled)

16. (Canceled)

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17. (Withdrawn) A method for potentiating the effects of a chemotherapeutically effective agent which comprises co-administering said chemotherapeutically effective agent in the presence of a protease effective to disrupt cell-cell adhesion, cell-matrix adhesion, or both.

18. (Withdrawn) A method for preventing the implantation or sustenance of a fertilized ovum which comprises administering an angiostatically effective amount of a proteinase to a person in whom such preventing is required, sufficient to prevent formation of new vasculature required for implantation or sustenance of said fertilized ovum.

19. (Withdrawn) A method for inhibiting vascular endothelial cell migration which comprises contacting vascular endothelial cells with a molecule selected from the group consisting of cysteine proteinase, HagA protein, HagA peptide, HagA-specific enzymatic activity, HagA active site mimetic, HagA analog, and combinations thereof or DNA.

20. (Withdrawn) A method for reducing cell-cell adhesion, cell-matrix adhesion, or both, which comprises contacting cells, matrix or both with an effective amount of a molecule selected from the group consisting of a cysteine proteinase, HagA protein, HagA peptide, HagA-specific enzymatic activity, HagA active site mimetic, HagA analog, and combinations thereof or DNA.

21. (Withdrawn) A composition for treatment or prevention of an angioproliferative condition comprising a pharmaceutically effective amount of a proteinase and an excipient for administration to a patient afflicted with said angioproliferative disorder.

22. (Withdrawn) The composition according to claim 21 wherein said angioproliferative condition is a carcinoma, sarcoma, melanoma, ocular retinopathy, retrolental fibroplasias,

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psoriasis, angiofibromas, endometriosis, hemangioma, rheumatoid arthritis, capillary proliferation within atherosclerotic plaque, or a combination of such disorders.

23. (Withdrawn) The composition according to claim 21 wherein said proteinase is derived from a bacterium.

24. (Withdrawn) The composition according to claim 23 wherein said bacterium is *Porphyromonas gingivalis.*

25. (Withdrawn) The composition according to claim 24 wherein said proteinase is PrtP, HagA, other *P. gingivalis* proteinase, a HagArep peptide, a fragment or active site thereof, or DNA.

26. (Withdrawn) A method for potentiating the effects of a chemotherapeutically effective agent which comprises co-administering said chemotherapeutically effective agent in the presence of a protease effective to disrupt cell-cell adhesion, cell-matrix adhesion, or both.

27. (Withdrawn) A method for preventing the implantation or sustenance of a fertilized ovum which comprises administering an angiostatically effective amount of a proteinase to a person in whom such preventing is required, sufficient to prevent formation of new vasculature required for implantation or sustenance of said fertilized ovum.

28. (Withdrawn) A method for inhibiting vascular endothelial cell migration which comprises contacting vascular endothelial cells with a molecule selected from the group consisting of cysteine proteinase, HagA protein, HagA peptide, HagA-specific enzymatic activity, HagA active site mimetic, HagA analog, and combinations thereof or DNA.

29. (Withdrawn) A method for reducing cell-cell adhesion, cell-matrix adhesion, or both, which comprises contacting cells, matrix or both with an effective amount of a molecule

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selected from the group consisting of a cysteine proteinase, HagA protein, HagA peptide, HagA-specific enzymatic activity, HagA active site mimetic, HagA analog, and combinations thereof or DNA.

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